

**NONDESTRUCTIVE INSPECTION (NDI) LABORATORY
(KC-135)**

- 1. Objective.** As prescribed in AFI 38-201, *Determining Manpower Requirements*, formerly designated as AFR 8-10, this Air National Guard Manpower Standard (ANGMS) quantifies the full-time manpower required to accomplish the tasks described in the work center description for varying levels of workload volume.
- 2. Authority.** Air National Guard (ANG) Regulation 66-14, *Maintenance Management*, 13 July 1988, contains policy and procedural guidance for the Nondestructive Inspection (NDI) Laboratory work center. This ANGMS was developed in accordance with the functional review procedures depicted in AFPAM 38-208V1, *Air Force Management Engineering Program (MEP) Processes*, formerly AFR 25-5.
- 3. Applicability.** This standard applies to all ANG KC-135 units with an established NDI function. The standard does not apply to the 108 ARW, 141 ARW, 126 ARW, 170 ARG, and 160 ARG because these units are located on an Air Force Base and, therefore, do not have an NDI requirement. This standard applies to peacetime operations only.
- 4. Standard Data:**
 - a. Classification. Type III.
 - b. Approval Date. 25 November 1992.
 - c. Man-Hour Data Source. Operational Audit (historical records and technical estimate techniques).
 - d. Standard Man-Hour Equation. $Y = 1.561 + 0.4038X$.
 - e. Workload Factor:
 - (1) Title: A Programmed Flying Hour.
 - (2) Definition: The average monthly programmed flying hours.
 - (3) Source of Count. USAF Program Document, Volume II, maintained by NGB/FM.
- 5. Application Instructions:**
 - a. The valid man-hour range for this ANGMS is 77.55 through 129.24.
 - b. The application instructions are as follows:
 - (1) Obtain the most current workload factor value for the workload factor as outlined in paragraph 4e above.
 - (2) Substitute this value in the man-hour equation for X and divide the resulting man-hours by the current civilian Man-Hour Availability Factor to determine requirements.
 - (3) Use the man-hour break point table developed by HQ USAF/PRQE to determine the whole manpower requirements.
 - (4) On AF Form 1113, Manpower Requirement column, find the column which represents the number of whole manpower requirements. Read up and down the column and across to the Air Force Specialty Title column to determine requirements by Air Force Specialty Code.
- 6. Statement of Conditions:**
 - a. There were no general conditions (environment, equipment, or facility) which had an impact on the development or application of this manpower standard.
 - b. There were no approved enhancements that impacted the man-hour equation for this manpower standard.

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- 2 Attachments**
- 1. Work Center Description**
 - 2. Standard ManpowerTable**

WORK CENTER DESCRIPTION

Nondestructive Inspection (NDI) Laboratory (KC-135)

DIRECT:

1. NONDESTRUCTIVE INSPECTION:

1.1. PERFORMS MAGNETIC PARTICLE INSPECTION:

1.1.1. PERFORMS PROCESS CONTROL REQUIREMENT OF STATIONARY AND PORTABLE MAGNETIC INSPECTION EQUIPMENT AND MATERIAL.

1.1.2. PERFORMS IN-SHOP AND OUT-OF-SHOP DIRECT CURRENT AND ALTERNATING CURRENT INSPECTION. Performs preinspection, inspection, and evaluates result. Demagnetizes part, post cleans part, and completes documentation.

1.1.3. DEVELOPS NEW TECHNIQUE ON AFTO FORM 242, NONDESTRUCTIVE INSPECTION DATA.

1.2. PERFORMS ELECTROMAGNETIC INSPECTION (EDDY CURRENT):

1.2.1. PERFORMS PROCESS CONTROL REQUIREMENT OF STATIONARY AND PORTABLE EDDY CURRENT INSPECTION EQUIPMENT.

1.2.2. PERFORMS IN-SHOP AND OUT-OF-SHOP EDDY CURRENT INSPECTION. Performs preinspection, inspection, evaluates results, and completes documentation.

1.2.3. DEVELOPS NEW TECHNIQUE ON AFTO FORM 242.

1.3. PERFORMS PENETRATING RADIATION (X-RAY) INSPECTION:

1.3.1. PERFORMS PROCESS CONTROL REQUIREMENT OF STATIONARY AND PORTABLE X-RAY INSPECTION EQUIPMENT.

1.3.2. PERFORMS IN-SHOP AND OUT-OF-SHOP X-RAY INSPECTION. Performs preinspection, inspection, evaluates results, and completes documentation.

1.3.3. MONITORS SAFETY PROGRAM. Monitors radiation safety program, maintains control of equipment, monitors log and procedure, and investigates accident and initiates preventive/corrective action.

1.3.4. PROCESSES FILM. Processes and evaluates film after x-ray operation, and evaluates the radiograph for correct density and for indication of defect.

1.3.5. DEVELOPS NEW TECHNIQUE ON AFTO FORM 242.

1.4. PERFORMS FLORESCENT DYE PENETRANT INSPECTION:

1.4.1. PERFORMS PROCESS CONTROL. Performs process control requirement on the fluorescent dye penetrant equipment and materials.

1.4.2. PERFORMS IN-SHOP AND OUT-OF-SHOP FLUORESCENT DYE PENETRANT INSPECTION. Performs inspection, post cleans part after completion of inspection, and evaluates results and completes documentation.

1.4.3. DEVELOPS NEW TECHNIQUES ON AFTO FORM 242.

1.5. PERFORMS ULTRASONIC INSPECTION:

1.5.1. PERFORMS PROCESS CONTROL. Performs process control requirement on the ultrasonic equipment and material.

1.5.2. PERFORMS IN-SHOP AND OUT-OF-SHOP ULTRASONIC INSPECTION. Performs preinspection, inspection, and evaluates result.

1.5.3. DEVELOPS NEW TECHNIQUE ON AFTO FORM 242.

1.6. PERFORMS OPTICAL INSPECTION. Performs preinspection, optical inspection with microscopic aid, and completes documentation.

2. WELDING CERTIFICATION. Performs radiographic inspection of weld plate.

3. OIL ANALYSIS PROGRAM:

3.1. COMPLETES DAILY STANDARDIZATION OF OIL ANALYSIS MACHINE.

3.2. ANALYZES OIL SAMPLE.

3.3. EVALUATES RESULT. Evaluates result, drafts, and forwards recommendation.

3.4. MAINTAINS RECORD. Maintains record on assigned engine.

3.5. PARTICIPATES IN CORRELATION AND CERTIFICATION PROGRAM. Analyzes sample and reports result.

3.6. KEYPUNCHES RECORD. Prepares record for transmittal and transmits record.

4. SPECIAL PLANNING OR SCHEDULING. Performs planning or scheduling associated with preparation for unit training assembly, annual tour, mobility preparation, battle damage program, or other special program.

5. MAINTENANCE AUTOMATED SYSTEM. Makes input to Maintenance Management Information Control System/Core Automated Maintenance System (MMICS/CAMS), and retrieves, analyzes, and reconciles data.

INDIRECT: Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of Standard Indirect work are Supervision, Administration, Meeting, Training, Supply, Equipment Maintenance, and Cleanup. See AFMS 00AA for the standard indirect description.

STANDARD MANPOWER TABLE											
WORK CENTER/FAC Nondestructive Inspection (NDI) Laboratory/ FAC 23170C			APPLICABILITY MAN-HOUR RANGE 77.55 - 129.24								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
Nondestructive Inspection	458X1	CIV	1								
TOTAL			1								
AIR FORCE SPECIALTY TITLE	AFSC	GRADE	MANPOWER REQUIREMENT								
TOTAL											